

C l a i m s :

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a11
C17
An endoscopic instrument, comprising:

a shaft,
a handle arranged at a proximal end of said shaft,
at least one working part arranged at a distal end of said shaft,
and at least one marking, having a fluorescing substance that can be excited to fluoresce by a light source, said marking is provided at a distal end section of said instrument,
wherein said fluorescing substance is selected in such a way that its excitation range lies in an excitation range of a tumor-specific photosensitizer.

2. The endoscopic instrument of claim 1, wherein said fluorescing substance is selected to be excited in a range from 370 nm to 440 nm.
3. The endoscopic instrument of claim 1, wherein said marking is configured as a marking element applied on said endoscopic instrument.
4. The endoscopic instrument of claim 3, wherein said marking element is applied removably.
5. The endoscopic instrument of claim 1, wherein said at least one distal working element is equipped with said marking.

6. The endoscopic instrument of claim 5, wherein two working elements are present and are configured as two mouth parts that are each equipped with a marking.
7. The endoscopic instrument of claim 1, wherein a marking is respectively provided both on said at least one working element and in a distal end section of said shaft.
8. The endoscopic instrument of claim 1, wherein said shaft is configured as a tubular shaft, and wherein said marking is configured as a tubular bushing that can be slid onto said tubular shaft. *p. 10, l. 4+*
9. The endoscopic instrument of claim 1, wherein said marking is provided with a coating, made of a transparent material, that covers said fluorescing substance.
10. The endoscopic instrument of claim 1, wherein said marking is configured as a marking element applied on said instrument, said marking element can be inserted into a body on which an endoscopic procedure is being performed, and said marking element can be anchored there.
11. The endoscopic instrument of claim 1, wherein said fluorescing substance is selected from the group consisting of fluorescein, eosin, the porphyrins, cadmium sulfide, amino-levulinic acid, aminolevulinic acid hydrochloride, Acridine Orange, tetracyclines, auramine, rhodamine B, rhodamine G, auramine Carbol Fuchsin, and Nile Blue sulfate.

12. The endoscopic instrument of claim 1, wherein multiple markings with differently excitable fluorescing substances are provided. p. 12
13. The endoscopic instrument of claim 1, wherein multiple markings containing different concentrations of said fluorescing substance are present. p. 13
- al 14. The endoscopic instrument of claim 1, wherein said marking is configured as a marking element that can be inserted into a body on which an endoscopic procedure is being performed, and can be anchored there, and wherein said marking element has a fluorescing substance corresponding to said of a further marking element inserted into said body.
15. The endoscopic instrument of claim 1, further containing a light-supplying apparatus and an endoscopic observation instrument that is connected to a light source, selected in such a way that said fluorescing substance can be excited to fluoresce by said light source.
16. The endoscopic instrument of claim 15, wherein said observation instrument is an endoscope.
17. The endoscopic instrument of claim 16, wherein said endoscope is equipped with an endoscopic camera.
18. The endoscopic instrument of claim 17, wherein there is provided downstream from said endoscopic camera an image processing system that continuously detects said fluorescing markings in an endoscopic image.

19. The endoscopic instrument of claim 1, wherein at least one endoscopic manipulation instrument is provided, through which an observation element can be introduced into a body, and at least one marking with a fluorescing substance corresponding to the marking of said endoscopic instrument is provided on an inner side of said manipulation instrument.
20. The endoscopic instrument of claim 19, wherein said manipulation instrument is a trokar and said observation element is an endoscope.
21. The endoscopic instrument of claim 18, wherein said light source emits pulsed light at least in a spectral excitation range of said fluorescing substance, and a pulse frequency corresponds to a video image frequency of said endoscopic camera.
22. The endoscopic instrument of claim 20, wherein said observation instrument has, at a distal end thereof, a transparent element having a fluorescing substance.
23. An endoscopic instrument, comprising:
a shaft,
a handle arranged at a proximal end of said shaft,
at least one working part arranged at a distal end of said shaft, and
at least one marking, having a fluorescing substance that can be excited to fluoresce by a light source, said marking is provided at a distal end section of said instrument,

wherein said fluorescing substance is selected in such a way that its excitation range lies in an excitation range of a tissue-autofluorescence.

24. The endoscopic instrument of claim 23, wherein said fluorescing substance can be excited in a range from 400nm to 500 nm.
25. The endoscopic instrument of claim 23, wherein said marking is configured as a marking element applied on said endoscopic instrument.
26. The endoscopic instrument of claim 25, wherein said marking element is applied removably.
27. The endoscopic instrument of claims 23, wherein said at least one distal working element is equipped with a marking.
28. The endoscopic instrument of claim 27, wherein two working elements are present and are configured as two mouth parts that are each equipped with a marking.
29. The endoscopic instrument of claim 23, wherein a marking is respectively provided both on said at least one working element and in a distal end section of said shaft.
30. The endoscopic instrument of claim 23, wherein said shaft is configured as a tubular shaft, and wherein said marking is configured as a tubular bushing that can be slid onto said tubular shaft.

31. The endoscopic instrument of claim 23, wherein said marking is provided with a coating, made of a transparent material, that covers said fluorescing substance.
32. The endoscopic instrument of claim 23, wherein said marking is configured as a marking element applied on said instrument, said marking element can be inserted into a body on which an endoscopic procedure is being performed, and said marking element can be anchored there.
33. The endoscopic instrument of claim 23, wherein said fluorescing substance is selected from the group consisting of fluorescein, eosin, the porphyrins, cadmium sulfide, aminolevulinic acid, aminolevulinic acid hydrochloride, Acridine Orange, tetracyclines, auramine, rhodamine B, rhodamine G, auramine Carbol Fuchsin, and Nile Blue sulfate.
34. The endoscopic instrument of claim 23, wherein multiple markings with differently excitable fluorescing substances are provided.
35. The endoscopic instrument of claim 23, wherein multiple markings containing different concentrations of said fluorescing substance are present.
36. The endoscopic instrument of claim 23, wherein said marking is configured as a marking element that can be inserted into a body on which an endoscopic procedure is being performed, and can be anchored there, and wherein said marking element has a fluorescing substance corresponding to said of a further marking element inserted into said body.

37. The endoscopic instrument of claim 23, further containing a light-supplying apparatus and an endoscopic observation instrument that is connected to a light source, selected in such a way that said fluorescing substance can be excited to fluoresce by said light source.
38. The endoscopic instrument of claim 37, wherein said observation instrument is an endoscope.
39. The endoscopic instrument of claim 38, wherein said endoscope is equipped with an endoscopic camera.
40. The endoscopic instrument of claim 39, wherein there is provided downstream from said endoscopic camera an image processing system that continuously detects said fluorescing markings in an endoscopic image.
41. The endoscopic instrument of claim 23, wherein at least one endoscopic manipulation instrument is provided, through which an observation element can be introduced into a body, and at least one marking with a fluorescing substance corresponding to the marking of said endoscopic instrument is provided on an inner side of said manipulation instrument.
42. The endoscopic instrument of claim 41, wherein said manipulation instrument is a trokar and said observation element is an endoscope.

43. The endoscopic instrument of claim 40, wherein said light source emits pulsed light at least in a spectral excitation range of the fluorescing substance, and a pulse frequency corresponds to a video image frequency of said endoscopic camera.

44. The endoscopic instrument of claim 42, wherein said observation instrument has, at a distal end thereof, a transparent element having a fluorescing substance.